

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Paulus Karremans	§	Group Art Unit:	2454
Serial No:	10/533,395	§	Examiner:	Park, Jeong S
Filed:	April 30, 2005	§	Confirmation No.	2194
		§		
		§		

For: A Method And System For Policy-Based Control In A Distributed Network

Via First Class Mail

Mail Stop Appeal Brief - Patents
Commissioner for Patents
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Date: September 24, 2005

Melissa Wingo
Melissa Wingo

Dear Sir:

APPEAL BRIEF

This Brief is submitted in connection with the decision of the Primary Examiner set forth in the Official Action dated January 7, 2009 (Paper No. 20081231), finally rejecting claims 1-3 and 5-18, which are all of the pending claims in this application.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §41.20(b)(2) that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1379.

I. Real Party in Interest

The real party in interest is Telefonaktiebolaget LM Ericsson, a Swedish corporation, with its principal office at SE-164 83 Stockholm, Sweden.

II. Related Appeals and Interferences

To the best of the knowledge of the undersigned, there are no related appeals and no interferences regarding the above application.

III. Status of Claims.

Claims 1-3 and 5-18 are pending in the present application, which are finally rejected and form the basis for this Appeal. Claims 1-3 and 5-18, including all amendments to the claims are attached in the Claims Appendix.

IV. Status of Amendments.

No Amendments or responses have been filed subsequent to the final rejection dated January 7, 2009. The claims set out in the Claims Appendix include all entered amendments.

V. Summary of Claimed Subject Matter.

Claim Element	Specification Reference
1. (Previously Presented) A method for policy-based control of a communication network having a distributed architecture, including at least one heterogeneous communication network, the method comprising:	Throughout the specification, including: page 7, lines 25-34
messaging between network elements, said network elements comprising at least one policy enforcement point (PEP), one or more policy decision points (PDPs), which network elements provide for registering events;	Throughout the specification, including: page 8, lines 1-13
establishing a service agreement between the PEP and the PDPs, the service agreement determining a subset of subscribed events of the PEP which may be requested by the PDPs;	Throughout the specification, including: page 8, lines 1-13
sending notifications of the occurrence of	Throughout the specification,

events subscribed to by the PDPs; and	including: page 8, lines 1-13
the PEP enforcing a policy upon said events if certain conditions are met.	Throughout the specification, including: page 8, lines 1-13

Claim Element	Specification Reference
10. A system for policy-based control of a communication network having a distributed architecture, including at least one heterogeneous communication network comprising:	Throughout the Specification, including: page 7, lines 15-24; page 11, line 29 through page 12, line 19.
means for messaging between network elements, said network elements comprising at least one policy enforcement point (PEP) the PEP having a server capability, one or more policy decision points (PDPs), the PDPs being changed to clients, which network elements provide for registering events;	Throughout the Specification, including: page 7, lines 15-24; page 11, line 29 through page 12, line 19.
means for establishing a service agreement between the PEP and the PDPs PDP, the service agreement determining a subset of subscribed events of the PEP which may be requested by the PDPs PDP;	Throughout the Specification, including: page 7, lines 15-24; page 11, line 29 through page 12, line 19.
means for sending notifications of the occurrence of events subscribed to by the PDPs; and	Throughout the Specification, including: page 7, lines 15-24; page 11, line 29 through page 12, line 19.
means associated with the PEP for enforcing a policy upon said events if certain conditions are met.	page 7, lines 15-24; page 11, line 29 through page 12, line 19.

The specification references listed above are provided solely to comply with the USPTO's new regulations regarding appeal briefs. The use of such references should not be interpreted to limit the scope of the claims to such references nor to limit the scope of the claimed invention in any manner.

VI. Grounds of Rejection to be Reviewed on Appeal.

a. Issue 1

The first issue presented for this appeal is whether claims 1-3, 6-12 and 15-18 are properly rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kohli et al (hereinafter Kohli) (US Patent No. 7,213,068 B1) in view of Eidler et al (hereinafter Eidler) (US Pub. No. 2003/0009444 A1).

b. Issue 2

The second issue presented for this appeal is whether claims 5, and 13-14 are properly rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kohli in view of Eidler et al and further in view of Putzolu (hereinafter Putzolu) (U.S. Patent No. 6,578,076 B1).

VII. Argument

A. Claims 1-3, 6-12 and 15-18 are not properly rejected under over Kohli in view of Eidler under 35 U.S.C. § 103(a):

Claims 1-3, 6-12 and 15-18

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. **Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations** (MPEP 2143). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The Applicant respectfully submits that the cited references, Kohli and Eidler and the Examiner's arguments do not render the independent claims unpatentable and the Examiner has failed to provide a prima facie case of obviousness.

Claim 1 is presented below and analogous system claim 10 contains similar limitations, including the subject limitations.

1.(Previously Presented)A method for policy-based control of a communication network having a distributed architecture, including at least one heterogeneous communication network, the method comprising:

messaging between network elements, said network elements comprising at least one policy enforcement point (PEP), one or more policy decision points (PDPs), which network elements provide for registering events;

providing the PEP with a server capability and changing the PDPs to clients;

establishing a service agreement between the PEP and the PDPs, the service agreement determining a subset of subscribed events of the PEP which may be requested by the PDPs;

sending notifications of the occurrence of events subscribed to by the PDPs; and

the PEP enforcing a policy upon said events if certain conditions are met. (emphasis added)

Elements in Applicant's claim 1 that are not found in either the Kohli or Eidler references include:

1. a policy enforcement point (PEP)...the PEP enforcing a policy and
2. a service agreement between the PEP and the PDPs

The Applicant's present invention solves an underlying problem involving multiple independent PDP's and defining their policies to be enforced by PEPs without having to first register the capabilities of a PEP (page 4, lines15-16). Another problem solved is that of PDPs that may be in another operator's network domain (page 12, lines 14-19). The state of the art considers the PEP a client and the PDP a server (page 3, lines 3-4). However, in the Applicant's invention, the PEP is provided with a server capability and the PDPs are turned into clients of the PEP, to make more possibilities to solve the problems (page 4, lines24-25).

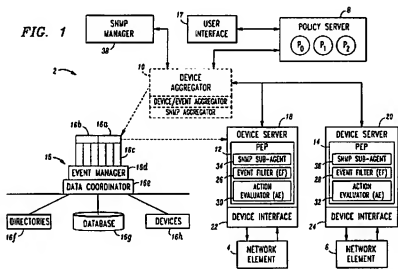
The Examiner maintains that the Kohli and Eidler references teach a method of policy-based control of a communication network utilizing Policy Enforcement Points (PEPs) and Policy Decision Points (PDPs) and a service agreement. The Applicant

respectfully submits that the definitions of PEP and PDP and service agreement represent a basis of the disagreement and argument. The Examiner equates the Kohli reference's version of PEP to the Policy Enforcement Point described in the Applicant's invention; the Applicant firmly rejects the comparison. At the time the Applicant's application was filed, disclosing the described PEP and PDP functionality of the Applicant's invention, a skilled person in the art would consider a device with "PEP" functionality to have features of a 'client' function in relation to the PDP, which would normally provide a 'server' function. However, the Applicant's invention switches the functions, whereby the Policy Enforcement Point incorporates a server function and the PDP takes on a client function with regard to the Policy Enforcement Point. (Summary)

The Applicant asserts that PEP and PDP are known acronyms in the art and the Applicant both defines and uses the acronyms properly. In contrast to the well known definition of PEP, the Kohli reference defines PEP as "Policy Enabling Point". Furthermore, the Kohli reference discusses the Policy Enabling Point term in great detail (col. 9, line 54 – col. 10, line 55). The description of the Policy Enabling Point does not jibe with the understood and well known description of a Policy Enforcement Point as described in the Background (para. 8 and 9) of the present invention. Furthermore, if Kohli's Policy Enabling Point was the well known term of art, PEP, there would be no reason to provide so much detail. The Applicant believes that the reason the PEP acronym is being described in such detail in the Kohli reference is because Kohli is providing a new definition and it is not the same as the well known PEP (Policy Enforcement Point).

Applicant has repeatedly explained that the PEP acronym in the present invention is not the same as the PEP (Policy Enabling Point) acronym, present in the Kohli reference. The widely accepted definition of the acronym PEP, or Policy Enforcement Point, as claimed in claims 1 and 10, is well known by skilled persons in the art and is expressed in the background of the Applicant's Specification as a logical entity that enforces a decision made by a Policy Decision Point (PDP) (Page 3, lines 28-30). At the time of filing of the Kohli application, the PEP acronym was already well known.

Kohli describes a system that is a strict hierarchical system. In the hierarchical system there cannot be conflicting policies and a problem not solved or even addressed by the Kohli reference is that of, e.g., two independent PDPs acting on the same events at the PEP. The Applicant respectfully submits that filtering and aggregation, cited by the Examiner, is not capable of solving conflicting policies in a hierarchical network, because of the nature of the hierarchical structure. Furthermore, Kohli does not disclose any way to solve conflicting policies other than to write a higher level policy.



U.S. Patent
May 1, 2007
Sheet 1 of 13
US 7,243,006 B1

Kohli

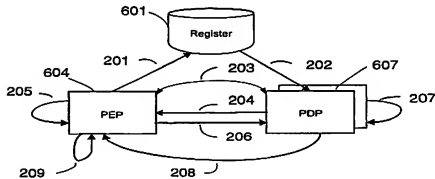


Fig. 2

Applicant

Furthermore, the Kohli reference's Figure 1 above discloses Kohli's architecture. Policy server 8, has been compared with the Applicant's PDP for registering events. Clearly the policy server in Kohli routes communications through a Device Aggregator 10 to the Policy Enabling Point 12 and 14. The Applicant's Figure 2 discloses the architecture of the Applicant's invention. There is no indication that the communications between the PEP and PDP are anything but direct. So, even if the Applicant's definition of the PEP were the same as Kohli, which it is not, there is an aggregator interposed between policy server and the Policy Enabling Points in Kohli. Comparing the Applicant's architecture (Figure 2, see below) there is no aggregator between the Applicant's PEP and PDP.

As stated by the Examiner, the element covering the "service agreement" is not disclosed by Kohli. The Eidler reference, which discloses a method and system for sharing secure storage in a computer network, is cited as disclosing the Applicant's "service agreement" and the Applicant believes that the Examiner has confused the term "service agreement" as defined in the Present Application with "Service Level Agreement" in Eidler. The Eidler reference has been cited for disclosing establishment of a service agreement, since, as the Examiner notes, there is no disclosure of a service agreement in Kohli.

The Applicant's service agreement is not a Service Level Agreement; Service Level Agreement (SLA) is a well known term in the art. Service Level Agreement, as disclosed in Eidler (para. [0034]), an actual agreement between the subscriber and the provider, provides desired attributes of system performance, system availability, storage capacity, etc.; all characteristics of a particular, agreed upon system service level between a subscriber and the provider. The Applicant respectfully asserts that the service agreement recited in independent claims 1 and 10 of the Applicant's present invention is defined sufficiently in the Applicant's application for one skilled in the art (page 8, lines 25-31) and would not be considered a SLA. The rejected element in claim 1, "...the service agreement determining a subset of subscribed events of the PEP which may be requested by the PDP; ..." on its face is not a Service Level Agreement

and the Detailed Description of the application further defines service agreement as events that the PDP can request from the PEP, not capacity or characteristics of the Storage Area Network as disclosed by Eidler.

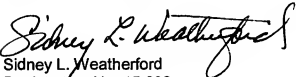
Thus, the prior art reference references do not teach or suggest all of the claim limitations. Therefore, the withdrawal of the rejections under 35 USC §103 for claim 1 and analogous claim 10, which contains similar limitations, is respectfully requested. Claims 2-3 and 6-9 and 11-12 and 15-18 depend respectively from claims 1 and 10 and recite further limitations with the novel elements of claims 1 and 10. Therefore, the allowance of claims 2-3, 6-9, 11-12 and 15-18 is respectfully requested

B. Claims 5, and 13-14 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Kohli in view of Eidler and further in view of Putzolu.

Putzolu is cited for teaching a priority scheme applied as in the Applicant's claims 5, 13 and 14. Putzolu is cited for teaching a priority scheme applied as in the Applicant's claims 5, 13 and 14. A priority scheme is disclosed, but the Applicant respectfully disagrees with the Examiner's interpretation of the cited portion of the Putzolu reference. Putzolu is interpreted as teaching a priority scheme used to make a local decision at policy client PEP (col. 5, lines 16-26). As the Applicant has described, the Policy Enforcement Point is serving as a policy client. As the Applicant teaches and has claimed, the PEP acts as a server towards the PDP and both Kohli, Eidler and Putzolu do not teach this concept, either individually or in combination. This being the case, the Applicant respectfully requests the allowance of claims 5, 13 and 14.

For all of the foregoing reasons, it is respectfully requested that claims 1-3 and 5-18 be allowed. A prompt notice to that effect is earnestly solicited.

Respectfully submitted,


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VIII. Claims Appendix.

1. (Previously Presented) A method for policy-based control of a communication network having a distributed architecture, including at least one heterogeneous communication network, the method comprising:

messaging between network elements, said network elements comprising at least one policy enforcement point (PEP), one or more policy decision points (PDPs), which network elements provide for registering events;

providing the PEP with a server capability and changing the PDPs to clients;

establishing a service agreement between the PEP and the PDPs, the service agreement determining a subset of subscribed events of the PEP which may be requested by the PDPs;

sending notifications of the occurrence of events subscribed to by the PDPs; and the PEP enforcing a policy upon said events if certain conditions are met.

2. (Previously Presented) The method for policy-based control of a communication network according to claim 1, wherein the policies of a PEP are available to the one or more PDPs.

3. (Previously Presented) The method for policy-based control of a communication network according to claim 1, wherein the one or more PDPs subscribe to one or more PEP policy enforcement capabilities outside the service domain of a PDP.

4. (Canceled)

5. (Previously Presented) The method for policy-based control of a communication network according to claim 1, where, in case of a PEP receiving from multiple PDPs, multiple suggestions to enforce said policy, a preference-or priority scheme is applied by said PEP for selecting such a suggestion to enforce a policy upon.

6. (Previously Presented) The method for policy-based control of a communication network according to claim 1, wherein, after the occurrence of the event, said messaging is synchronous, wherein event data are sent together with the notifications from the PEP to the PDP.

7. (Previously Presented) The method for policy-based control of a communication network according to claim 1, wherein, after occurrence of the event, said messaging is asynchronous, wherein event data are sent from the PEP to the PDP after a request by the PDP for sending said event data.

8. (Previously Presented) The method for policy-based control of a communication network according to claim 1, wherein the method comprises the steps of:

- a PEP registering events that PDPs can subscribe to;
- the PEP registering policy enforcements that the PDP may suggest to the PEP;

- the PDP obtaining said registered events;
- the PDP obtaining said registered policy enforcements;

9. (Previously Presented) The method for policy-based control of a communication network according claim 8, wherein the method further comprises the steps of:

- The PDP requesting a PEP to be notified of a specified event;
- The PDP requesting a PEP for a possibility to enforce a policy;
- The PEP notifying a PDP that the specified event has occurred;
- The PDP suggesting to said PEP a policy enforcement appropriate for said specified event; and
- The PEP enforcing said policy enforcement.

10. (Previously Presented) A system for policy-based control of a communication network having a distributed architecture, including at least one heterogeneous communication network comprising:

means for messaging between network elements, said network elements comprising at least one policy enforcement point (PEP) the PEP having a server capability, one or more policy decision points (PDPs), the PDPs being changed to clients, which network elements provide for registering events;

means for establishing a service agreement between the PEP and the PDPs, the service agreement determining a subset of subscribed events of the PEP which may be requested by the PDPs;

means for sending notifications of the occurrence of events subscribed to by the PDPs; and

means associated with the PEP for enforcing a policy upon said events if certain conditions are met.

11. (Previously Presented) The system for policy-based control of a communication network according to claim 10, having access means for making the policies of a PEP available to the one or more PDPs.

12. (Previously Presented) The system for policy-based control of a communication network according to claim 10, having subscribing means for the one or more PDPs to subscribe to one or more PEP policy enforcement capabilities outside their own service domain.

13. (Previously Presented) The system for policy-based control of a communication network according to claim 10, where, in case of multiple PDPs having registered to the same event, prioritizing means are provided for applying a preference- or priority scheme by the PEP for sending the notifications to one or more of said multiple PDPs.

14. (Previously Presented) The system for policy-based control of a communication network according to claim 10, where, in case of a PEP receiving multiple suggestions from multiple PDPs, selecting means are provided for applying a

preference-or priority scheme by said PEP for selecting a suggestion to enforce a policy upon.

15. (Previously Presented) The system for policy-based control of a communication network according to claim 10, wherein synchronous messaging means are provided to enable, after the occurrence of the event, synchronous messaging, wherein event data are sent together with the notifications from the PEP to the PDP.

16. (Previously Presented) The system for policy-based control of a communication network according to claim 10, wherein asynchronous messaging means are provided to enable, after occurrence of the event, asynchronous messaging, wherein event data are sent from the PEP to the PDP after a request by the PDP for sending said event data.

17. (Previously Presented) The system for policy-based control of a communication network according to claim 10, having a register arranged for:

- a PEP to register events that a PDP can subscribe to;
- the PEP to register policy enforcements that the PDP may suggest to the PEP;
- the PDP to obtain said registered events;
- the PDP to obtain said registered policy enforcements.

18. (Previously Presented) The system for policy-based control of a communication network according to claim 10, wherein PDPs comprise stakeholders such as operators, application developers, vendors, governmental organizations, end-users or service providers.

IX. Evidence Appendix.

None

IX. Related Proceedings Appendix.

None